

# *Rat-Resistant Construction Materials*

In a study to determine the resistance of construction materials to penetration by rats, panels of construction materials, including aluminum, were exposed to gnawing by wild roof rats. In specially designed cages, single sheets of test materials were used as barriers between the rats and food and water. The rats, kept on reduced rations, attacked the panels in an effort to reach the bait.

The study showed that rats require a gnawing edge to make any appreciable progress in penetrating materials. They can develop such an edge on soft materials, but with harder materials they require a construction joint or a fracture as a point of attack. All but a few test materials were penetrated when a gnawing edge was exposed.

Without gnawing edges, some materials were penetrated in 1 to 8 nights. Others were penetrated in about the same length of time, but required a gnawing edge. Some of the harder materials and heavier-gauge aluminum alloys required 34 to 126 nights' exposure with a gnawing edge. The hardest grades of asbestos cement and metal base plates of sheet iron withstood up to 122 nights of exposure without penetration or serious damage.

It was concluded that none of the materials, by themselves, were absolutely ratproof, but that composition building materials in the harder grades of asbestos cement products could be made relatively ratproof by protecting construction joints or other raw edges and by protecting the material itself in easily accessible areas.

Aluminum alloys were quite easily penetrated except for the harder tempers in the thicker sheets. Aluminum sheet material used as construction facing should be protected at all raw edges, preferably by sheet iron. Although aluminum alloys shaped as door channels with-



## Public Health MONOGRAPH

### No. 11

The accompanying summary covers the principal findings presented in Public Health Monograph No. 11, published concurrently with this issue of Public Health Reports. The authors are members of the staffs of the Communicable Disease Center and the Division of Water Pollution Control (Southeast Drainage Basin), Public Health Service.

Readers wishing the data in full may purchase copies of the monograph from the Superintendent of Documents, United States Government Printing Office, Washington 25, D. C. A limited number of free copies are available to official agencies and others directly concerned on specific request to the Public Inquiries Branch of the Public Health Service. Copies will be found also in the libraries of professional schools and the major universities, and in selected public libraries.

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Tarzwel, C. M., Stenburg, R. L., Nicholson, H. P., and Lynn, W. D.: The resistance of construction materials to penetration by rats. Public Health Monograph No. 11 (Public Health Service Publication No. 277). U. S. Government Printing Office, Washington, 1953. Price 20 cents.

stood gnawing exposure considerably longer than the same alloys exposed as plain sheets, they are not considered suitable replacements for galvanized sheet iron as protective door channels.

## Federal Care and Treatment Of Insane Prisoners

The power of the Federal Government to provide for the detention and care of "insane" persons in its custody was narrowly construed in a recent opinion of the Court of Appeals for the 10th Circuit—*Wells v. Attorney General*, 201 Fed. (2) 556 (1953).

The Court held that the Congress has power to provide proper care and treatment for persons who become temporarily insane while in the custody of the United States awaiting trial on criminal charges, and for Federal prisoners who become mentally incompetent during the term of their imprisonment after conviction. However, the Court also held that the Federal Government has neither constitutional nor inherent power to enter the general field of lunacy and to assume to act as *parens patriae* for the permanently insane. Section 4246 of the Federal Code of Criminal Procedures was accordingly interpreted as applying only to the temporarily insane.

Accused of a Federal offense, the petitioner in the case had been found to be mentally incompetent after a period of observation at the Medical Center for Federal Prisoners, Springfield, Mo. Pursuant to statute, he was com-

mitted to the custody of the United States Attorney General until he should become mentally competent to stand trial or until the charge against him should be disposed of according to law. While in jail awaiting transfer to an institution, he petitioned for a writ of habeas corpus challenging the validity of his commitment. The District Court denied his petition. The Court of Appeals remanded the case with directions for a hearing and finding as to whether the petitioner's mental incompetency was temporary or permanent.

A dissenting opinion in the case took the view that once the Federal Government has acquired jurisdiction over mental incompetents, as in an arrest for or conviction of a Federal offense, its duty is to protect and care for them whether they are temporarily or permanently incompetent; also that the manner in which the duty is to be discharged is to be determined by the Federal Government.

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*This note has been prepared by the Public Health Division, Office of the General Counsel, Department of Health, Education, and Welfare.*

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### Public Health Service Publications Issued During 1952

A listing of all Public Health Service publications released during the calendar year 1952 is now available upon request to the Public Inquiries Branch, Public Health Service, U. S. Department of Health, Education, and Welfare, Washington 25, D. C. Entries are classified by general subject matter. Periodicals issued during the year are also listed.

# publications

## Health of Workers in Chromate Producing Industry

Public Health Service Publication No. 192. 1953. 131 pages; tables, charts. 50 cents.

An investigation made by the Public Health Service relating to the incidence of carcinoma among workers in chromate production substantiates this problem. The detailed report of findings includes the origin of the study, which was requested by the chromate industry, an abstract-summary, discussion and recommendations, and an appendix giving chemical analyses methods of air-borne particulate materials.

Factors which might influence the abnormally high rate of bronchiogenic cancer among these workers are reported in the correlation of clinical and environmental findings. Other derivatives of chromite ore than those incriminated by previous investigators are considered.

Recommendations are that established industrial hygiene engineering principles be applied to all chromate plants; that workers in the chromate industry for 5 or more years be examined by X-ray every 3 months and have followup clinical examinations by local health departments; and that the morbidity and mortality experience studies among chromate workers be continued.

## Public Sewage Treatment Plant Construction, 1952

Public Health Service Publication No. 291. 1953. 18 pages; tables.

The Nation's progress in reducing the pollution of its water resources through construction of municipal sewage treatment plants is summarized in this report, which reveals that a total of 515 communities in the United States awarded contracts for this type of construction in 1952. The total expenditure involved, \$137 million, is less than that expended

for any year since 1948 and falls short of the long-term average of \$141 million for the period 1915-50.

In addition to this information the report contains tables showing contract awards by drainage basin, population served, type of construction, and cost. Data are given on present and estimated future water use, and population and industrial growth. The tables also show contract awards by amount spent for the years 1948 to 1952 and the expenditures for various types of public utility construction are compared.

The accompanying text discusses the data in terms of the importance of pollution control for health and economic reasons and explains why communities are lagging in municipal sewage-treatment plant construction. A complete list of the 1952 contract awards is given in the appendix.

## The Dietitian in the Hospitals of the Public Health Service

Public Health Service Publication No. 254. 1953. 26 pages; illustrated. 15 cents.

One of several publications on careers in the Public Health Service, this small booklet describes the duties and responsibilities of the dietitian in Public Health Service hospitals.

It points out that in addition to supplying the nutritional needs of the patients, the dietitian serves as a member of the professional medical team, working closely with the physicians and dentists on research projects and on special studies and experiments with patients requiring therapeutic diet treatment.

The booklet describes the work of the hospital dietary service. The commissioned corps system is explained and the qualifications and requirements for appointment in the corps are covered, as are salary, quarters, and other benefits.

## Venereal Disease Clinic Directory

Public Health Service Publication No. 257. Revised 1952. 148 pages. 60 cents.

This directory is published biennially by the Public Health Service's Division of Venereal Disease to provide the latest information on clinics and other facilities available for the diagnosis and treatment of the venereal diseases.

The material included in the recently published 1952 edition has been compiled from information supplied near the end of the calendar year by health departments of the 48 States; the Territories of Alaska, Hawaii, Puerto Rico, and the Virgin Islands; and by the Division of Hospitals of the Public Health Service. The names and addresses of each diagnostic and treatment facility, the days and hours of service, as well as the fee basis for use of each facility are listed.

Summaries of premarital and prenatal laws as they pertain to venereal disease are given for each State and Territory having such laws. In addition, laboratory facilities available in each State are described.

According to the directory, 39 States and 2 Territories have premarital laws requiring blood tests and physical examinations for venereal disease; 42 States and 3 Territories have prenatal laws requiring blood tests for the pregnant woman.

## Biological Products

**Establishments Licensed for the Preparation and Sale of Viruses, Serums, Toxins and Analogous Products, and the Trivalent Organic Arsenic Compounds.**

Public Health Service Publication No. 50. Revised December 1, 1952. 1953. 46 pages. 20 cents.

In accordance with section 351 of the Public Health Service Act regulating the sale of viruses, serums, toxins, or analogous products or arsphenamine in the District of Columbia and in interstate traffic, the

Public Health Service licenses establishments manufacturing these products in the United States and abroad. The granting of a license means that the establishment is inspected regularly as to the technical ability of the responsible personnel and as to sanitary conditions of the premises. It means that the products are manufactured under methods considered to be safe and that the finished product is tested as to safety and purity and compliance with official standards of potency.

This publication lists all establishments holding licenses and the names of the products for which they are licensed. Part II is a list of the various biological products with the license numbers of the establishments producing them, and part III is an alphabetic listing of the manufacturers.

### **Management of Chancroid, Granuloma Inguinale, and Lymphogranuloma Venereum**

Public Health Service Publication No. 255. Revised 1953. By Robert B. Greenblatt. 66 pages; illustrated. 30 cents.

This is the second edition of the publication issued in 1943 as Supplement No. 19 to the *Journal of Venereal Disease Information*. It has been completely rewritten and revised to include the latest methods used in the management of chancroid, granuloma inguinale, and lymphogranuloma venereum since the advent of the antibiotic drugs.

The booklet describes in detail the etiology, incubation period, epidemiology, clinical signs and symptoms, clinical course, diagnosis, and treatment of these venereal diseases. Tables carry information on incidence of the diseases, as well as data on the comparative efficacy of various therapeutic methods. A special section is concerned with differential diagnosis. The bibliography is extensive and offers a comprehensive survey of the literature on the venereal diseases with which it is concerned.

Written by Dr. Greenblatt, an outstanding authority, in collaboration with several of his colleagues, this book is considered a medical reference work on chancroid, granuloma inguinale, and lymphogranuloma venereum.

### **Clean Water for the South**

Public Health Service Publication No. 250. 1953. 6 pages; illustrated. 5 cents.

### **Clean Water for the Tennessee**

Public Health Service Publication No. 271. 1953. 6 pages; illustrated. 5 cents.

Based on the Summary Reports on Water Pollution for the Southeast Drainage Basin and the Tennessee

River Drainage Basin, these publications are two of a series of brief discussions of the 15 technical reports on the water pollution problem in the United States.

Written in nontechnical language and planned with the State pollution control agencies as a stimulus for local action, the leaflets outline in digest form the specific pollution problems in the Southeast Drainage Basin and Tennessee River areas.

The extent of pollution damage as it affects health, industry, and recreation in each section is discussed, and the areas' and communities' contributions to the problem are outlined. Some of the cities which are now taking positive steps to combat water pollution are named as illustrations of present progress, and public support of local action to control one of the most serious threats to the Nation's welfare is strongly urged.

## **for the general public**

### **Ulcers**

Health Information Series No. 71. Public Health Service Publication No. 280. 1953. 1-fold leaflet. 5 cents; \$1.75 per 100.

This health information leaflet discusses what is known about the cause of ulcers and their course of development. The warning signs of ulcers are described, with emphasis on the necessity of prompt diagnosis and early treatment under the supervision of a physician. Various methods of treatment, such as rest, medicine, and diet, are outlined, and the reasons are given for their use.

### **Care of the Eyes**

Health Information Series No. 64. Public Health Service Publication No. 113. Reprinted 1953. 1-fold leaflet. 5 cents; \$1.75 per 100.

In spite of the defense nature has provided to protect the eyes, they can still be damaged by neglect and abuse. This health information

leaflet explains that good care of the eyes begins with infants, through the protection of their eyes from bright lights and the dangers of pointed objects. School-age children should be taught good reading habits and people of all ages should practice cleanliness in the care of their eyes.

The leaflet also advises regular eye examinations by an eye specialist and explains the difference between the oculist or ophthalmologist, optometrist, and optician.

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Publications for which prices are quoted are for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Orders should be accompanied by cash, check, or money order and should fully identify the publication (including its Public Health Service publication number). Single copies of most Public Health Service publications can be obtained without charge from the Public Inquiries Branch, Public Health Service, Washington 25, D. C.

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## Recruitment Plan

**MICHIGAN.** Believing that rewarding careers in the field of health, less well known than medicine, dentistry, pharmacy, or nursing, may be overlooked by parents and teachers in counseling students of junior and high school age, professional groups are cooperating in a new recruitment plan.

The Medical Society, the Michigan Health Council, the Hospital Association, and the nursing profession have joined forces in the State to present the advantages of a career as an assistant, or associate, in one of the numerous medical service professions where shortages exist or where shortages are anticipated.

To coincide with the observance of Michigan Hospital Week, the bulletin of the health council announced that the findings of a recent survey of these professions revealed 960 medical service positions then open in the State. The bulletin named the vocational categories where immediate placement could be made. The survey, made by the Michigan Hospital Association, concluded that in 5 years, even if present needs were met, there still would be 1,890 openings for dietitians, laboratory technicians, medical record librarians, and X-ray technicians, among others.

The wide range of opportunities available in the expanding health and medical associate professions are highlighted in a brochure on career planning prepared by the Michigan State Medical Society.

Together with descriptive text and action photographs, the booklet features a comprehensive chart which outlines each of 26 vocations. The vocational outlines include educational requirements, Michigan schools offering instruction, and information sources outside the State, employment conditions, salary ranges, and opportunities for advancement and security.

## Regional Legislative Conferences

**FLORIDA.** Six regional legislative conferences have been held to acquaint State legislators and community groups with the legislative goals of public health agencies. To assure the greatest coverage, the conferences were held in six key cities. Brief descriptions of proposed health legislation and appropriation requests and a listing of legislation in which the various health organizations had especial interest were distributed.

The conferences were guided by the Florida Public Health Association: Its executive committee provided the necessary funds; its legislative committee made the plans. Tentative dates were set in advance. Community leaders were selected as local regional chairmen in each key city.

A copy of the agenda and a list of the participating groups were sent by letter to all county health officers 2 months before the first meeting. The purpose of the conferences was explained, and the proposed dates, the names of the regional chairmen, and the counties included in each of the six regional areas were given. Each health officer was requested to act as conference coordinator for his county and to suggest the names of leading citizens to be invited to

attend. Other notices were sent to all State legislators and to various individuals and groups.

General news stories describing the conference plans were sent to all newspapers in the State 2 weeks before the first meeting. Regional news stories were sent to the papers in the regional area 1 week ahead of each regional conference. These stories quoted the regional chairmen on the importance of the meeting and repeated the time, place, location, and purpose. Two days before the regional meeting, local news stories with local names and local plans were sent to the county health officers for release in the counties within the regional area. Copies of all stories were sent to radio stations in each region, and news commentators were asked to use the information for local broadcasts.

Presenting their program goals before the regional legislative conferences were representative official and voluntary State groups concerned with public health problems. Among these, in addition to the Florida Public Health Association, were the Florida State Board of Health, the Mental Hygiene Association, the State division of the American Cancer Society, the Florida Tuberculosis and Health Association, the Anti-Mosquito Control Association, the Tuberculosis Board, the Children's Commission, the Hospital Association, and the division of vocational rehabilitation of the Department of Education.

Legislators, official and voluntary agencies, and civic groups were well represented. The estimated total attendance at the 6 regional sessions was 900 including 49 members of the Florida legislature. By the questions they asked, members of the audiences demonstrated their real interest in the public health programs and the proposed legislation.